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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,658	02/25/2004	James B. Roane	24310-00005	2856
24919	7590	01/11/2006		
MCAFFEE & TAFT TENTH FLOOR, TWO LEADERSHIP SQUARE 211 NORTH ROBINSON OKLAHOMA CITY, OK 73102			EXAMINER WERNER, JONATHAN S	
			ART UNIT	PAPER NUMBER
			3732	

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/786,658	<b>Applicant(s)</b> ROANE, JAMES B.	
	<b>Examiner</b> Jonathan Werner	<b>Art Unit</b> 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/7/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (IDS) submitted on 6/7/04 was filed before the mailing date of the first Office Action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 7, 9-14, 16, 18, and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Bleiweiss (US 2003/0013067). As to claims 1 and 12, Bleiweiss discloses in Figure 1 a set of endodontic instruments (470) of progressively smaller sizes wherein each of the instruments has an elongated shaft (74) comprising a proximal end (top arrow of L<sub>2</sub>) and a distal end (bottom arrow of L<sub>2</sub>) and a short enlarged continuously tapered working length (L<sub>1</sub>) formed on the shaft adjacent to the distal end; and the short enlarged continuously tapered working length having at least one continuous cutting edge (79) thereon. As to claims 2 and 13, each instrument has multiple cutting edges (79) on the short enlarged continuously tapered working length

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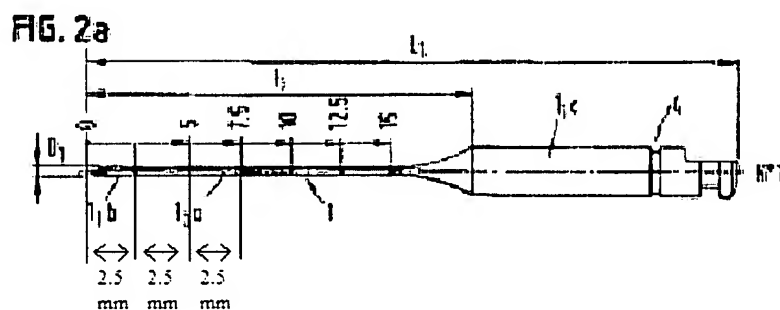
thereof formed by multiple flutes thereon (4H). As to claims 3 and 14, the cutting edges and flutes are angled and spiraled (79, Figure 1). As to claims 5 and 16, each instrument has three cutting edges on the short enlarged continuously tapered working length (4B). As to claims 7 and 18, the cross-sectional shape of each instrument is triangular (4B), square (4C) or polygonal (4D). As to claims 9 and 20, the distal end of each instrument is of a bi-conical shape (78; alternate embodiment in Figure 10) for guiding the instrument in the direction of the root canal axis (Figure 5). As to claims 10-11 and 21-22, the shaft of each instrument between the proximal end thereof and the short enlarged continuously tapered working length thereof includes flutes and cutting edges thereon (14a) that engage a root canal when the root canal is curved (Figure 2B); and the shaft of each instrument has an increasing diameter from the working length to the proximal end (74, Figure 1).

3. Claims 1, 4, 6, 12, 15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Buchanan (US 5,921,775). As to claims 1 and 12, Buchanan discloses in Figures 12-15 a set of endodontic instruments of progressively smaller sizes wherein each of the instruments has an elongated shaft comprising a proximal end, a distal end and a short enlarged continuously tapered working length (104) formed on the shaft adjacent to the distal end; and the short enlarged continuously tapered working length having at least one continuous cutting edge (102) thereon. As to claims 4 and 15, a larger instrument of the set has a working length taper of 0.1 (mm/mm) and the smallest one of the set has a working length taper of 0.05 (mm/mm) (column 16, lines 33-35). As

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to claims 6 and 17, Figures 15E(1-3) show the instrument has six cutting edges on the working length formed by three flutes thereon.

4. Claims 1, 8, 12 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Malentacca (US 5,735,690). As to claims 1 and 12, Malentacca discloses a set of endodontic instruments of progressively smaller sizes in Figure 2, wherein each of the instruments has an elongated shaft comprising a proximal end (right of  $l_1$ ), a distal end (left of  $l_1$ ) and a short enlarged continuously tapered working length ( $l_{1b}$ ) formed on the shaft adjacent to the distal end; and the short enlarged continuously tapered working length having at least one continuous cutting edge (col 2, ln 2) thereon. As to claims 8 and 19, the working length of each instrument is no longer than 3 mm. This can be seen, for example, by examining Figure 2a, in which  $L_1$  is 32 mm,  $l_1$  is 19 mm, and  $l_{1a}$  is comprised of 2.5 mm segments, wherein each segment is the approximate size of the working length  $l_{1b}$  (col 2, ln 11-24):



### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3, 7, 14 and 18 are additionally rejected under 35 U.S.C. 103(a) as being unpatentable over Bleiweiss in view of Malmin (US 4,019,254). As to claims 3, 7, 14 and 18, Bleiweiss discloses a set of endodontic instruments as previously described, but fails to show the cutting edges and flutes are parallel to the axes of the instruments or that the cross-sectional shape of the working length is triangular with concave sides. Malmin, however, teaches an endodontic instrument with cutting edges and flutes that are parallel to the axes of the instruments (Figure 7), and a working length that has a cross section that is triangular with concave sides (115). Therefore it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to make the cutting edges and flutes parallel to the axes of the instruments and have a working length with a cross section that is triangular and concave in shape in order to properly mill out the root canal and thus improve operation (col 3, ln 64-66).

### ***Conclusion***

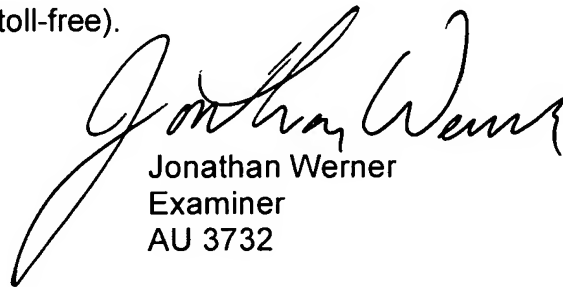
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to included form PTO-892 for all additional pertinent prior art related to endodontic instruments.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Werner whose telephone number is (571) 272-2767. The examiner can normally be reached on Monday-Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Werner  
Examiner  
AU 3732

JSW  
12/30/05



MELBA N. BUMGARNER  
PRIMARY EXAMINER